Gulf of Mexico Harmful Algal Bloom Bulletin

Region: AL/MS/FL

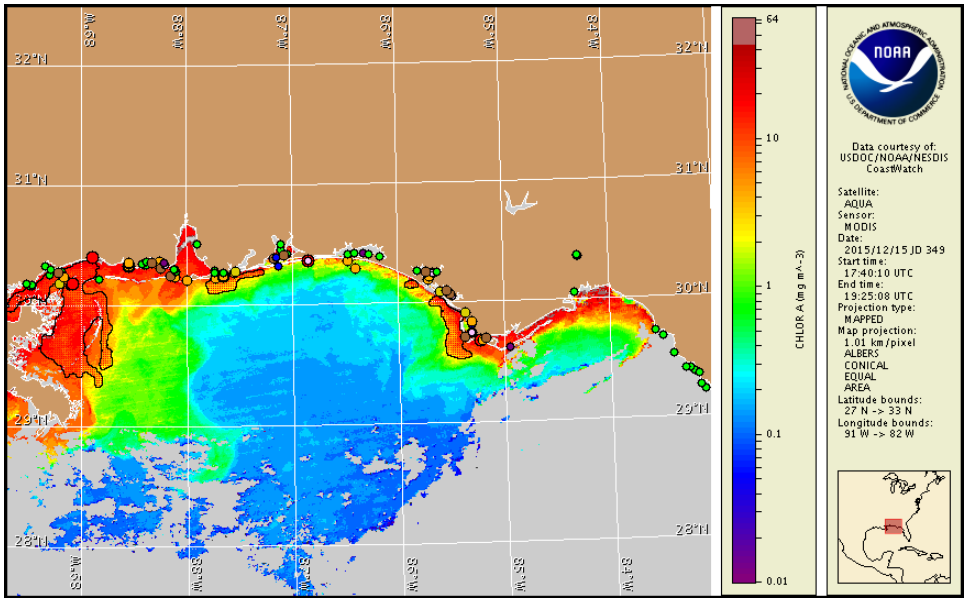
Thursday, 17 December 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 14, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from December 7 to 16: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information for Florida can be obtained through FWC Fish and Wildlife Research Institute at: http://myfwc.com/redtidestatus

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as Florida red tide) are present along- and offshore Harrison and Jackson counties in Mississippi; Mobile and Baldwin counties in Alabama; and portions of northwest Florida from Escambia to Franklin counties. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for alongshore Mississippi, Alabama, and northwest Florida Thursday, December 17 to Monday, December 21 is listed below:

County Region: Forecast (Duration)
Harrison County: Low (Th-Sa), High (Su-M)
Harrison County, bay regions: High (Th-M)
Jackson County: High (Th-M)
Mobile County: High (Th-F), Moderate (Sa-M)
Baldwin County: Low (Th-Sa), High (Su-M
Baldwin County, east bay regions: Moderate (Th-M)
Escambia County: Low (Th-Sa), High (Su-M)
Escambia County, bay regions: Low (Th-M)
Santa Rosa County: Low (Th-Sa), High (Su-M)
Santa Rosa County, bay regions: Low (Th-M)
Okaloosa County: Very Low (Th-Sa), Moderate (Su-M)
Walton County, bay regions: Very Low (Th-M)
Bay County, bay regions: Moderate (Th-M)
Gulf County: Moderate (Th), Very Low (F-M)
Gulf County, west bay regions-St. Joseph Bay area: Moderate (Th-M)
Gulf County, east bay regions-Indian Lagoon area: High (Th-M)
Franklin County, bay regions: Low (Th-M)
All Other NWFL County Regions: None expected (Th-M)
SWFL County Regions: Visit http://tidesandcurrents.noaa.gov/hab/#swfl

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Florida Department of Health and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html.Respiratory irritation and fish kills have been reported alongshore Mobile County, AL and alongshore Escambia and Okaloosa counties in northwest Florida. Dead fish have also been reported from Walton and Gulf counties in northwest Florida.

Analysis

Samples collected along- and offshore Mississippi, Alabama, and northwest Florida indicate background to 'high' *Karenia brevis* concentrations from Harrison County, MS to Franklin County, FL. 'High' *K. brevis* cell concentrations are present along- and offshore Harrison and Jackson counties, MS, Baldwin County, AL, and Escambia, Santa Rosa, and Gulf counties, FL (MDMR, ADPH, FWRI; 12/10-14). Up to 'medium' *K. brevis* cell concentrations have been reported in the west bay region of Bay County (FWRI; 12/15). Fish kills have been reported in Jackson County, MS; along Dauphin Island, Mobile County, AL; Escambia, Okaloosa, Walton, and Gulf (St. Joseph Bay) counties, FL (MDMR, ADPH, FWRI; 12/14-17). Respiratory irritation has been reported in Escambia

and Okaloosa counties, FL (FWRI; 12/14-16). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at: http://myfwc.com/redtidestatus.

In Recent ensemble imagery (MODIS Aqua, 12/15), patches of elevated to high chlorophyll (2 to 17μg/L) with the optical characteristics of *K. brevis* are visible along- and offshore from Mississippi to Franklin County Florida. Patches are visible extending up to 67 miles offshore Harrison County, MS, 8 miles offshore Baldwin County, AL, and 15 miles offshore Gulf County, FL. Due to satellite limitations the possibility exists that some of the chlorophyll anomaly visible along- and offshore Louisiana and Mississippi could be produced by the sediments discharging from the Mississippi River.

Variable winds forecasted today through Monday may minimize the potential for transport of surface *K. brevis* concentrations along the coasts of Mississippi, Alabama, and northwest Florida.

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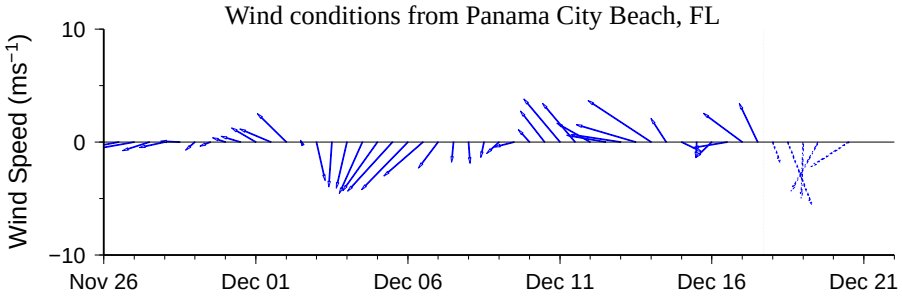
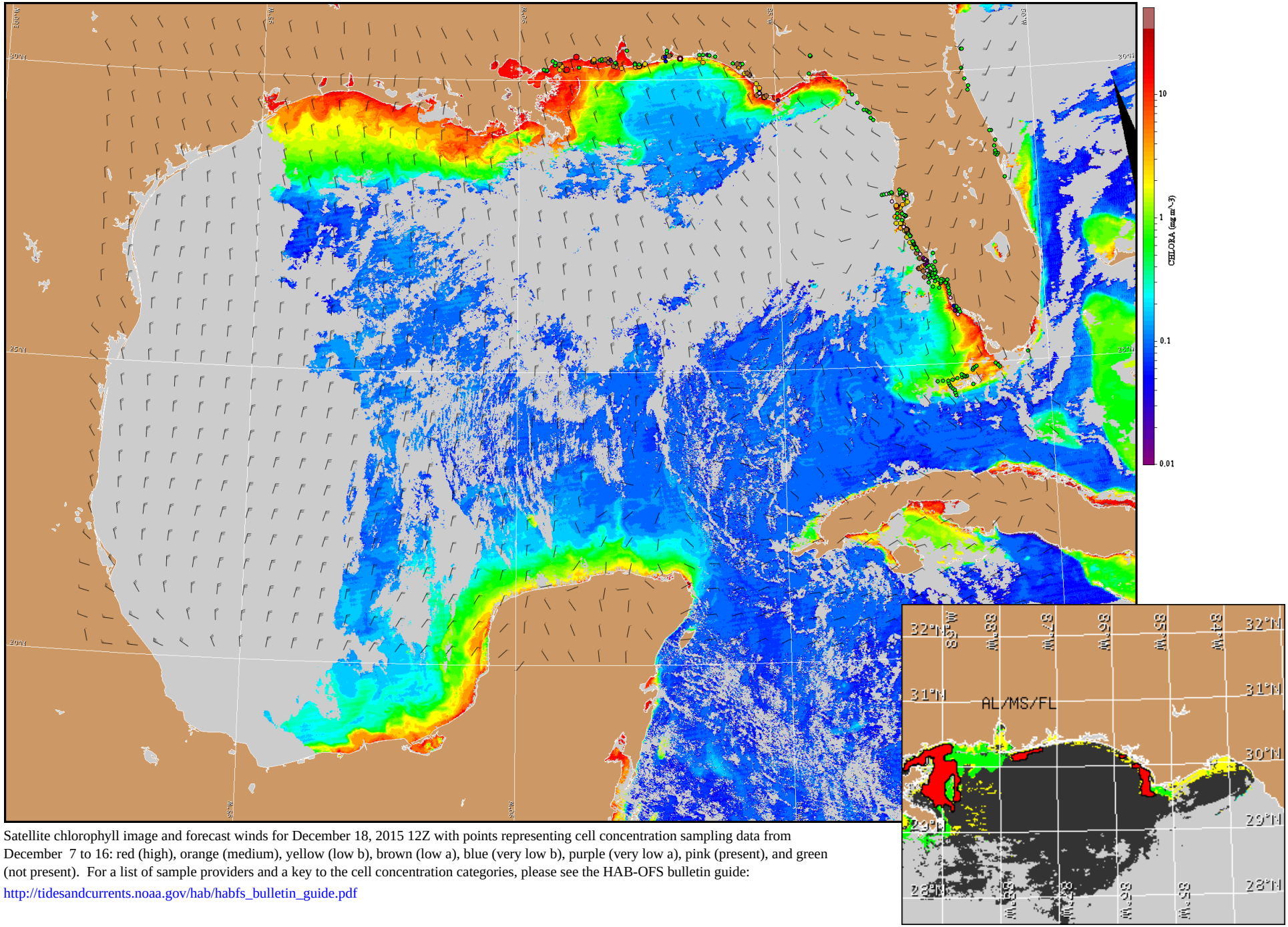


Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

Wind Analysis

Escambia to Gulf counties: Southwest winds (15-20kn, 8-10m/s) today shifting northwest (15-20kn) later today through tonight. North winds (20kn, 10m/s) Friday. Northeast winds (15-20kn) Friday night and Saturday. East winds (15-20kn) Saturday night and Sunday. Southeast winds (15kn, 8m/s) Sunday night and Monday.



Satellite chlorophyll image and forecast winds for December 18, 2015 12Z with points representing cell concentration sampling data from December 7 to 16: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).